

IN THE UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF TEXAS  
DALLAS DIVISION

HYOSUNG TNS, INC.,

Plaintiffs,

v.

DIEBOLD NIXDORF, INC.,

Defendants.

§  
§  
§  
§  
§  
§  
§  
§

Civil Action No. 3:16-CV-0364-N

**MEMORANDUM OPINION AND ORDER**

This Order addresses the construction of one of several disputed claim terms pursuant to *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). Plaintiff Hyosung TNS, Inc. (“Hyosung”) brought suit against Defendant Diebold Nixdorf, Ind. (“Diebold”) for infringement of US Patent No. 8,523,235 (the “’235 Patent”). Having reviewed the relevant intrinsic evidence in the record, and such extrinsic evidence as necessary, the Court finds the disputed phrase “cheque standby unit” is indefinite; accordingly, no further claim construction is necessary.

**I. BACKGROUND OF THE INVENTIONS**

The invention relates to an improvement to an automated teller machine (“ATM”). In particular, the invention allowed for depositing bundles of cash or checks. One aspect of the invention was an escrow area where a bundle of checks could be held so that if the

customer decided to cancel the deposit transaction before it was completed, the pending bundle of checks could be returned to the customer: the “cheque standby unit.”<sup>1</sup>

## II. CLAIM CONSTRUCTION STANDARDS

### *A. Basics*

Claim construction is a question of law for the Court, *see Markman*, 517 U.S. at 391, although it may involve subsidiary factual questions. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 324-27 (2015). In construing the claims of a patent, the words comprising the claims “are generally given their ordinary and customary meaning” as understood by “a person of ordinary skill in the art in question at the time of the invention,” i.e. a “POSITA.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc) (citations and internal quotation marks omitted). Accordingly, courts must determine the meaning of claim terms in light of the resources that a person with such skill would review to understand the patented technology. *See id.* at 1313 (citing *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998)). First, “the person of ordinary skill in the art is deemed to read the claim term . . . in the context of the entire patent, including the specification.” *Id.* If the specification “reveal[s] a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess . . . , the inventor’s lexicography governs.” *Id.* at 1316. Likewise, if “the specification . . . reveal[s] an intentional disclaimer, or disavowal, of claim scope by

---

<sup>1</sup> When quoting the language of the claim, the Court will use the spelling “cheque;” when otherwise referring to a paper negotiable instrument, the Court will use the spelling “check.”

the inventor . . . [,] the inventor’s intention, as expressed in the specification, is regarded as dispositive.” *Id.* (citation omitted). While the claims themselves provide significant guidance as to the meaning of a claim term, the specification is generally dispositive as “it is the single best guide to the meaning of a disputed term.” *Id.* at 1314-15 (internal quotation marks omitted).

In addition to the specification, courts may examine the patent’s prosecution history – that is, the “complete record of the proceedings before the PTO and includ[ing] the prior art cited during the examination of the patent.” *Id.* at 1317 (citation omitted). “Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent.” *Id.* (citation omitted). In particular, courts must look to the prosecution history to determine “whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.* (citations omitted). “[W]here the patentee has unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution disclaimer attaches and narrows the ordinary meaning of the claim congruent with the scope of the surrender.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003).

Finally, in addition to evidence intrinsic to the patent at issue and its prosecution history, courts may look to “extrinsic evidence, which ‘consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.’” *Phillips*, 415 F.3d at 1317 (quoting *Markman*, 52 F.3d at 980).

In general, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.* at 1318.

When the intrinsic evidence, that is the patent specification and prosecution history, unambiguously describes the scope of a patented invention, reliance on extrinsic evidence, which is everything outside the specification and prosecution history, is improper. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). While the Court may consult extrinsic evidence to educate itself about the invention and relevant technology, it may not rely upon extrinsic evidence to reach a claim construction that is clearly at odds with a construction mandated by the intrinsic evidence. *See Key Pharm. v. Hercon Labs. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998).

#### ***B. “Nonce” Words and Means Plus Function***

Courts have held that certain terms are simply placeholders and invoke means plus function construction. The Court will address the contested term below, but will preface that with an overview of the applicable legal principles.<sup>2</sup>

Three recent Federal Circuit decisions guide this inquiry. In *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (en banc),<sup>3</sup> the Federal Circuit considered the force of the presumption that use of the word “means” is necessary to invoke means-

---

<sup>2</sup>This discussion is taken from *SecurityProfiling, LLC v. Trend Micro America, Inc.*, 2018 WL 4585279, at \*1-2 (N.D. Tex. Sep. 25, 2018).

<sup>3</sup>Only Part II.C.1 of the opinion is en banc. *See id.* at 1347 n.3.

plus-function under 35 U.S.C. § 112, ¶ 6.<sup>4</sup> The Court held that the presumption is not strong. *Id.* at 1349. It further held that use of the term “module” invoked means-plus-function. *Id.* at 1350. Following the district court, it understood that “‘module’ is simply a generic description for software or hardware that performs a specified function.” *Id.*

Generic terms such as “mechanism,” “element,” “device,” and other nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word “means” because they typically do not connote sufficiently definite structure and therefore may invoke § 112, para. 6.

*Id.* (quotation omitted). The Court also found it unavailing that one skilled in the art could have programmed a computer to perform that function. “[T]he fact that one of skill in the art could program a computer to perform the recited functions cannot create structure where none otherwise is disclosed.” *Id.* at 1351. “The standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Id.* at 1349. “When a claim term lacks the word ‘means,’ the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

In *Zeroclick, LLC v. Apple, Inc.*, 891 F.3d 1003 (Fed. Cir. 2018), a panel of the Court reversed a district court holding that “program” and “user interface code” were nonce

---

<sup>4</sup>After the prosecution of the ’235 patent, this paragraph was recodified as 35 U.S.C. § 112(f).

terms under *Williamson*. The Circuit identified three errors in the district court's approach. "First, the mere fact that the disputed limitations incorporate functional language does not automatically convert the words into means for performing such functions." *Id.* at 1008 (citing *Greenberg v. Ethicon EndoSurgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996)). Second, the district court wrongly removed the terms from their context. *Id.* For example, "user interface code" was not a generic black box, but a reference to a conventional program existing in prior art at the time of the inventions. *Id.* Third, the district court failed to make pertinent fact findings that the terms it identified were used as a substitute for "means." *Id.* at 1009.

### ***C. The Diebold Case***

Most recently, in *Diebold Nixdorf, Inc. v. Int'l Trade Comm'n*, 899 F.3d 1291 (Fed. Cir. 2018), the Circuit reversed a ruling by the International Trade Commission. The *Diebold* case is of extreme importance to this Court's disposition of the instant *Markman* Order, as it involved the same parties, the same patent, and the same disputed phrase: "cheque standby unit." As mentioned above, the "cheque standby unit" was described as an "escrow" where the ATM could hold a deposit after a customer physically placed items to be deposited into the ATM but before the customer had confirmed the transaction, to allow for the return of the deposit items if the customer cancelled the transaction. The Federal Circuit held that "Diebold has shown that the term 'cheque standby unit,' as understood by one of ordinary skill in the art, both fails to recite sufficiently definite structure and recites a function without reciting sufficient structure for performing that

function.” *Id.* at 1298. In reaching that holding, it noted that Diebold was not required to offer extrinsic evidence, but could meet its burden by relying only on intrinsic evidence. *Id.* at 1299-1300. The Court also held that the patent owner’s expert’s testimony did not show that “cheque standby unit” had a reasonably well understood meaning in the art, and simply described the phrase in terms of its function. *Id.* at 1300-01. The Circuit thus found that § 112, ¶ 6 applied, and then held that the specification did not disclose sufficient structure corresponding to the claimed function so the claims with those terms were indefinite. *Id.* at 1302-03.

The obvious question is if the Federal Circuit has already decided this question, why is this Court revisiting that? As the Court stated in its Order denying Diebold’s Rule 12(b)(6) motion to dismiss, raising that issue:

In *Diebold*, the Federal Circuit acknowledged that trial courts “interpret patent claims” and arrive at legal conclusions “*after* deciding factual disputes.” *Diebold Nixdorf, Inc.*, 899 F.3d at 1299 (emphasis added). Further, the Federal Circuit expressly noted evidence, not presented at the time, that could warrant a different determination on the issue of the ’235 patent’s validity. *Id.* at 1300 n.4; *see also Tex. Instruments, Inc.*[v. *Cypress Semiconductor Corp.*], 90 F.3d [1558,] 1562–63, 1570 [(Fed. Cir. 1996)] (affirming district court finding of noninfringement even though the Federal Circuit had affirmed a prior ITC finding of infringement).

The Court finds that there may be evidence not presented on the ITC record considered by the Federal Circuit that could merit a different claim construction and a different conclusion regarding the validity of the ’235 patent. But this is a fact issue that cannot be resolved on the pleadings. Consequently, raising the Federal Circuit’s decision to dispose of this case at the Rule 12(b)(6) stage is unavailing when, as here, Hyosung has adequately pled a claim for patent infringement and the validity of the ’235 patent cannot be determined without resolution of disputed facts. The Court thus denies Diebold’s motion to dismiss.

Order at 4-5 (Dec. 5, 2019) [83].

The parties have fulsomely provided the Court with expert testimony not present in the record before the ITC, and thus the Federal Circuit in *Diebold*. The Court must now decide whether this additional evidence makes a difference in the outcome. It does not.

### III. “CHEQUE STANDBY UNIT” WOULD NOT DENOTE STRUCTURE TO A POSITA

Before this Court, Hyosung attempts to accomplish what the Federal Circuit said it had not done before the ITC: show that “cheque standby unit” (or CSU) would denote a particular structure or classes of structure to a POSITA. It relies on the opening and rebuttal declarations of its expert, Dr. Howard. *See* Appendix to Diebold’s Opening Br. at 142, 368 [73-1].<sup>5</sup> [hereinafter App.] Diebold likewise relies on the declarations of its expert, Dr. Singhose. *Id.* at 15, 271. Unsurprisingly, Howard says CSU would denote two classes of structure to a POSITA, Singhose says it would not. Under *Teva*, the Court is faced with making a credibility call between the two experts on this point. *See Teva, supra*, 135 S. Ct. at 836-39. Initially, the Court observes that both experts are extremely well qualified and appear very knowledgeable regarding the technology at issue.<sup>6</sup>

---

<sup>5</sup> The declarations appear at multiple places in the record. For convenience, the Court will cite to Diebold’s appendix, which has all four together. The Court cites to the ECF page number, rather than the printed Appendix page number at the bottom of the page images. The Court has also reviewed the transcript of the Howard deposition; it does not materially alter the content of his declarations, so the Court will limit its discussion to the declarations.

<sup>6</sup> For what it is worth, the Court’s last *Markman* order found against Dr. Singhose on similar fact questions. *See Unicorn Global Inc. v. Golabs, Inc.*, Civil Action No. 3:19-CV-0754-N (N.D. Tex. May 26, 2020) [134].



On balance, the Court finds Singhose to be more credible and persuasive on this issue. Initially, as Singhose notes, CSU is a coined phrase. *See* App. at 50 (Singhose Decl. ¶ 134). It is not standard industry usage<sup>7</sup> and was apparently created by the drafter of the '235 patent. It is virtually impossible that a coined term, before it was published in the patent, would have indicated some structure or classes of structure to a POSITA. *See Adv. Ground Info. Sys. v. Life360, Inc.*, 830 F.3d 1341, 1348 (Fed. Cir. 2016) (coined term not used by POSITA to designate structure).

Moreover, the structure of Howard's declaration does not establish that the term CSU indicates a structure to a POSITA. He more nearly indicates that a POSITA aware of the prior art "would be able to design" a CSU. For example:

Given the figures and detailed description of structure, the components, and the operation of the escrow unit, it is my opinion that a person of ordinary skill in the art would understand that the term "cheque standby unit" in the '235 Patent encompasses the structure of the escrow unit described in the 2003 Wincor Manual, and *would be able to design* a "cheque standby unit" using the well-known components disclosed in the reference combined with the person of ordinary skill in the art's knowledge.

App. at 188 (Howard Decl. ¶ 116) (emphasis added).

Whether a POSITA would be able to design structure to perform the designated function is not the question, however: "the fact that one of skill in the art could program a computer to perform the recited functions cannot create structure where none otherwise is disclosed." *Williamson, supra*, 792 F.3d at 1351. "The standard is whether the words of

---

<sup>7</sup> Singhose did a Google search for the phrase and all the search results were related to the '235 patent and the litigation between these parties. *See* App. at 50 (Singhose Decl. ¶ 135).

the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Id.* at 1349. What the Howard declaration establishes is that the *function* of the CSU was known to a POSITA and was embodied in various forms in the prior art, not that the *term* CSU indicated that structure to a POSITA.<sup>8</sup> Howard would have a better case if the drafter of the ’235 patent had used the term “escrow unit,” instead of CSU. *See App.* at 181-82 (Howard Decl. ¶ 101) (citing eight patents using variants of the term “escrow” for structures performing functions comparable to those of the CSU). But the drafter did not.

The Court also agrees with Singhose that Howard is being overly simplistic in describing the world of escrow units as divided into drum structures and stacking structures. *See App.* at 56-57 (Singhose Decl. ¶ 157). As Singhose demonstrates at great length, other than the presence of a stacker or drum, the cited references were all very different. *See App.* at 75-76 (Singhose Decl. ¶ 193) (“The foregoing demonstrates that none of the structures identified for each reference discussed in the Howard Declaration are the same. Each reference discloses different combinations that are structurally and functionally different.”).

---

<sup>8</sup> One could imagine the following colloquy based on the Howard Declaration:

Court: Ms. POSITA, could you design a CSU for an ATM for me?

POSITA: I’m not sure. I’ve never heard of a CSU before. What does it do?

Court: It does X.

POSITA: It does X? Oh, sure then. There are lots of ATM designs out there that do something similar to X. I’m confident that, with a little effort, I could modify one of those designs to make you a CSU for an ATM that does X.

For the reasons stated above, the Court finds that Singhose is more persuasive and credible regarding the CSU than Howard. The Court, therefore, finds that the phrase “cheque standby unit” would not be understood by persons of ordinary skill in the art at the relevant time to have a sufficiently definite meaning as the name for structure.

Having made this determination, the balance of this Court’s inquiry is now controlled by the Federal Circuit’s ruling in *Diebold*. Having determined that the term CSU is not a name for structure, the Court must follow the “means plus function” analysis of section 112, paragraph 6. *Diebold*, 899 F.3d at 1297-98. The question then becomes whether the ’235 patent recites sufficient structure to perform the function of the CSU. “Examining the evidence intrinsic to the ’235 patent, we observe that the claims do not recite *any* structure, much less ‘sufficiently definite structure’ for the ‘cheque standby unit.’” *Id.* at 1298 (emphasis in original); *see also id.* at 1302-03. Having resolved the factual dispute in favor of Diebold, this Court has no further discretion to vary from the Federal Circuit’s holding regarding the precise language at issue.<sup>9</sup> Accordingly, the Court holds that the phrase “cheque standby unit” is indefinite, and that the ’235 patent is invalid for indefiniteness under 35 U.S.C. § 112, para. 2. *Diebold*, 899 F.3d at 1303.

### CONCLUSION

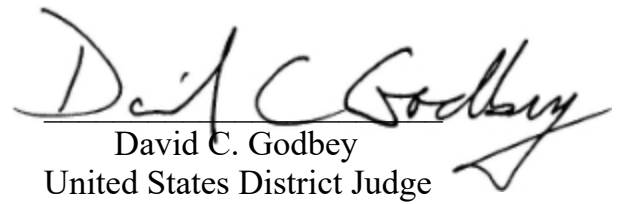
It appears to the Court that, given its finding and holding regarding the phrase “cheque standby unit,” it is unnecessary to proceed with further claim construction. The Court directs the parties to confer and determine if they can submit a proposed final

---

<sup>9</sup> If this Court were free to make its own determination, it would reach the same result.

judgment that is agreed as to form. If they are unable to agree on that, the Court directs the parties to provide their respective views regarding what further proceedings the Court should conduct to bring this case to final judgment by letters docketed on CM/ECF no later than 5:00 p.m., fourteen (14) days from the date of this Order.

Signed July 23, 2020.

  
David C. Godbey  
United States District Judge